Apple Displays FAQ

Q. Which monitors is Apple offering?

A. We're offering the exciting Apple Cinema Display, the largest flat-panel monitor available, and are relaunching our line of award-winning Apple Studio Displays. Both the new 15-inch flat-panel Apple Studio Display and the 22-inch flat-panel Apple Cinema Display feature a pure digital interface that delivers distortion-free images every time, without adjustment. In addition, our CRT-based 17-inch (16-inch viewable) and 21-inch (19.8-inch viewable) Apple Studio Displays have a brand-new look that matches our Pentium-crushing* Power Mac G4 computer.

* In processor and Photoshop tests.

Apple Flat-Panel Displays

Q. Is the Apple Cinema Display the largest flat-panel display available on the market?

A. Yes. Creative professionals have told us that their dream display would provide an enormous virtual workspace while taking up very little physical space. In addition, it wouldn't compromise on color reproduction quality or force trade-offs, such as the need to squint at undersized or deformed text and images. The Apple Cinema Display is this dream come true. With the largest panel commercially available, it offers over 1.6 million pixels in a stunning 22-inch (diagonal) screen, providing twice the brightness, twice the sharpness, and three times the contrast ratio of a traditional CRT-based display. The Apple Cinema Display supports a true 16.7 million colors and has a pure digital interface that delivers distortion-free images every time. Roll all of this into an elegant, streamlined industrial design and pair it with the awesome performance of the Power Mac G4 with Velocity Engine, and you have it: the creative professional's dream system.

Q. How do the screen size and density of the Apple Cinema Display benefit creative professionals?

A. The Apple Cinema Display was designed from the ground up with the creative professional in mind. The key benefit of the large screen for these customers is the sheer amount of information that can be displayed on the screen at one time. The display supports a resolution of 1600 by 1024 pixels—that's over 1.6 million pixels appearing on the screen simultaneously, which translates to 25 to 63 percent more pixels than the most popular resolutions on 21-inch displays. For our customers, seeing two full pages side by side is no longer a dream, but is now a reality with the Apple Cinema Display.

The wide format (16:10 aspect ratio) is also ideal for creative projects, such as double-page spreads and tabloid-size printed materials. But just as important, the Apple Cinema Display has been designed to display its 1.6 million pixels at a screen density that doesn't require users to squint at small, hard-to-read text. And because it's a full 22 inches in size, the display can be comfortably used, day in and day out, at its native 1600- by 1024-pixel resolution.

Q. Why are the screen size and aspect ratio of the Apple Cinema Display important for video and film professionals?

A. With the Apple Cinema Display, video and film professionals who work with wide formats can fill the entire screen without distorting the image or shrinking it down to fit. The upcoming HDTV standard is based on the 16:9 aspect ratio, and most films are shot in aspect ratios favoring a wide format. But even editors who work with the traditional 4:3 aspect ratio will have a distinct advantage, because the Apple Cinema Display provides plenty of room for both the video workspace and their tool palettes.

Q. What advantage does the digital graphics interface have over traditional display interfaces?

A. It provides much sharper images and is far easier for the customer to use. Here's why: Cathode-ray tube (CRT) displays require an analog interface, because they create light and color from an electron beam. To create an analog signal for the CRT display from the digital data in graphics memory, the computer's graphics controller must perform a digital-to-analog conversion. Because both the Apple Cinema Display and the Apple Studio Display are digital devices, they do not require this conversion process to analog form, which can lead to image degradation. Instead, these displays receive a distortion-free digital signal directly from the graphics controller. Not only does this mean that all the pixels are razor sharp from screen edge to screen edge, it also means that the screen needs no adjustments whatsoever. When customers combine the new Power Mac G4, featuring the ATI RAGE 128 Pro, with either of our new flat-panel displays, they will experience outstanding image quality along with the ultimate in user simplicity.

Q. How does the Power Mac G4, featuring the ATI RAGE 128 Pro graphics card, support the digital graphics interface of the Apple Cinema Display and the Apple Studio Display?

A. The ATI RAGE 128 Pro graphics card is specifically designed to output the Transition Minimized Differential Signaling (TMDS) digital graphics signal, by way of its Digital Visual Interface (DVI) connector, directly to the new Apple digital flat-panel displays. This means that owners of either display will enjoy the simplicity and quality of a pure digital graphics signal. Both the exciting new Apple Cinema Display, the largest flat-panel monitor ever brought to market, and the new 15-inch Apple Studio Display incorporate this digital graphics interface. The displays receive the digital signal directly from the ATI graphics card without having to go through a digital-to-analog conversion. The result: distortion-free, razor-sharp text and graphics, without the need for adjustments for signal degradation. This greatly simplifies the overall user experience.

Q. Can I play full-motion video on my Apple Cinema Display or Apple Studio Display?

A. Absolutely. Our flat-panel displays were designed to have lightning-fast pixel response, enabling you to watch DVD movies or edit digital video as never before. You can display full-motion video, graphics, or animation on either Apple flat-panel display without the artifacts that are sometimes found in flat-panel technology. This superior graphics capability makes the Apple flat-panel displays ideal companions for the new Power Mac G4, which offers DVD drives and fast FireWire connections.

Q. How accurate is the color on the Apple Cinema Display and Apple Studio Display?

A. Managing color accuracy on an LCD-based display is no easy feat, but Apple has addressed the major issue affecting how well LCD-based displays can reproduce color: their inherent viewing-angle limitations. On most LCDs, users experience often severe color shifts if they view images that are even just a little bit off-axis. But the Apple Cinema Display greatly reduces this problem. It uses an advanced technology that delivers up to 160-degree viewing angles in both vertical and horizontal dimensions. The benefit of this wide viewing angle is that the Apple Cinema Display delivers much better color uniformity than any other flat-panel display available today.

The Apple Studio Display also offers impressive color accuracy in a smaller LCD screen, with the best viewing angles you can get for a flat-panel display its size—up to 90 degrees vertically and 120 degrees horizontally. Although the viewing angle of the Apple Studio Display is not quite as wide as that of the Apple Cinema Display, in fact it doesn't need to be—smaller screens are naturally viewed at shallower angles. So you won't need to compromise on color resolution, even if you do compromise a bit on size.

But you get even more than extrawide viewing angles—you also get true 8-bit drivers, delivering an amazing color gamut of 16.7 million colors. With all these benefits, you can see why the Apple Cinema Display and the Apple Studio Display are the ideal flat-panel displays for creative professionals, providing a better color solution than any other LCD displays on the market. There's only so much we can say about color in words, as the real proof is in the viewing. We invite you to compare our LCD displays head-to-head with the competition, so you can see for yourself.

Q. Besides their stunning looks, what other important design attributes do the Apple Cinema Display and Apple Studio Display offer?

A. Both the Apple Cinema Display and Apple Studio Display are designed to offer a large virtual desktop while taking up very little physical space. For the Apple Cinema Display, we designed a support stand that minimizes desktop space but allows users to adjust the display effortlessly to different viewing angles. With the Apple Studio Display, we wanted to provide customers with options for how this already compact LCD display could be most flexibly positioned on the desktop. To achieve this flexibility, we created two different stands: a desktop stand providing a wide range of tilt, swivel, and height adjustments; and a picture-frame stand, which further minimizes the desktop footprint.

Both displays are designed with a uniquely functional cable and a two-port, self-powered USB hub. A single cable exits the display and passes through the stand so that it sits perfectly on the desktop. Along the cable a bit, it separates into power, USB, and graphics signals, which are attached to the appropriate connectors. A clever ring design at this separation point serves as a place for a security attachment, so you can protect your valuable possession. And a two-port, self-powered USB hub offers a convenient way to connect desktop peripherals, such as keyboards and digital audio speakers.

Q. When will the Apple Cinema Display and Apple Studio Display be available, and where can customers buy them?

A. The Apple Cinema Display is expected to be available worldwide in December through the online Apple Store. It is ordered in conjunction with a specially configured Power Mac G4 via the Apple Store build-to-order program. Initially quantities will be limited.

The Apple Studio Display will also be available worldwide in December through all Apple distribution channels, including national and regional resellers, direct sales to education accounts, and the online Apple Store.

CRT-Based Apple Studio Displays

Q. What are new features of the award-winning CRT-based Apple Studio Displays?

A. The new 17-inch (16-inch viewable) Apple Studio Display and 21-inch (19.8-inch viewable) Apple Studio Display with ColorSync technology have been modified to complement the design of the new Power Mac G4. In addition, the 17-inch display joins the 21-inch Apple Studio Display in supporting the strict TCO 99 standard for image performance, low power consumption, low emissions, and recyclability.

Q. How does the design of the Apple Studio Displays benefit creative professionals?

A. The design of the Apple Studio Displays is as functional as it is stunning. The plastic bezel around the screen is achromatic, to minimize any influence on the user's perception of colors on the screen. The design also meets strict standards for the amount of light reflectivity it generates, reducing eyestrain when you sit in front of the display for hours on end. Both Apple Studio Displays feature a tripod base that lets you easily tilt and swivel the monitor, with space underneath for keyboard storage. The 21-inch display also has a four-port USB hub, making the connection of desktop peripherals extremely easy.

Q. Why is color calibration important for the 21-inch Apple Studio Display?

A. A display's performance can be affected by various factors, such as changes in electronic components, phosphor aging, and ambient light conditions. Without compensating for these performance variations, you cannot trust the screen as an accurate color reference. Color images may look different when printed, when viewed on other displays, and even when viewed on the same display over time.

A calibrated display works with Apple's ColorSync software to achieve higher-quality screen-to-screen and screen-to-print matching. The 21-inch Apple Studio Display with ColorSync technology is the most affordable monitor available that provides integrated, professional-quality color accuracy and consistency—day after day, week after week, year after year.

Q. How does the Apple Studio Display with ColorSync technology differ from other calibrated monitors?

A. The Apple Studio Display with ColorSync technology has a higher level of color consistency, is much easier to use, and is far more affordable than competing monitors. We've achieved this by developing a special kind of calibration system to measure and control color. Traditional CRT display measurement systems include an external photometric light sensor, also called a "puck" because of its shape. This device is physically placed on the front of the screen. But Apple designed a system that doesn't require this cumbersome and expensive device. Instead, our measurement system works internally. Rather than measuring the light output of the monitor as the puck does, the system inside the Apple Studio Display measures the current of the electron beam. Because beam current is ultimately responsible for generating the colors on the screen, this provides an accurate measurement of the color your eye actually sees.

Q. It sounds like the flat-panel Apple Cinema Display outperforms CRT displays in brightness, contrast, and sharpness, while providing good color accuracy. Does it eliminate the need for a CRT-based display?

A. While there's no doubt that many customers will covet the size, graphics performance, small footprint, and leading-edge technology of the Apple Cinema Display, these features come at a relatively steep price (and in smaller available quantities) compared with the more mature CRT technology used in the Apple Studio Displays. Color professionals will also value the controlled color accuracy that the Apple Studio Display with ColorSync delivers via its patented internal calibration system.

Q. When will the CRT-based Apple Studio Displays be available, and where can customers buy them?

A. The Apple Studio Displays are available now through all Apple distribution channels, including national and regional Apple resellers, direct sales to education accounts, and the Apple Store on the World Wide Web.

Q. Where can I go for more information on Apple displays?

A. For more information about Apple displays, visit www.apple.com/products on the World Wide Web. Other resources on the web include the following:

Apple Computer, Inc.	www.apple.com
Apple displays	www.apple.com/displays
Power Mac G4 computer	www.apple.com/powermac
The Apple Store	www.apple.com/store
USB information	www.apple.com/usb
Listing of USB peripherals	guide.apple.com/uscategories/usb.html

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